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NAVSHIPS 347-1830

Instruction Book

A. C. PORTABLE SUBMERSIBLE PUMP



PROSSER INDUSTRIES

DIVISION OF PUREX CORPORATION

ANAHEIM, CALIFORNIA

(Formerly Mfg. by A. O. Smith & Sawyer Electric)

23551AF

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SECTION 1

General Data

The portable submersible pump A. C. described, conforms with Military Specification MIL-P-17454 B (SHIPS) dated 10 March 1954 and Amendment-1 dated 3 June 1960. Model 777H is assigned as the designation by Prosser Industries, the manufacturer. Prosser Industries was formerly a division of A. O. Smith Corporation. Substitute Prosser Industries wherever A. O. Smith Corporation appears in this instruction book.

Motor Unit

Motor rating: H.P. 5, Phase 3, Cycle 60, RPM 3450, Voltage (as specified) 115, 220 or 440 A.C.

Voltage	Amperes		
	Full Load	Locked Rotor	Starting Condition
115	30	120	60
220	15	60	30
440	7½	30	15

Capacity

Pump rated capacity: 140 G.P.M. at 70 ft. total head.
200 G.P.M. at 50 ft. total head.

Weights

Weight of pump and component parts are as follows:

Net weight of pump with basket strainer, less cables, foot valve and switch	61 lbs.
Net weight of foot valve	9¾ lbs.
Net weight of handle	1 lb.
Net weight of basket strainer	4 lbs.
Net weight of star strainer	10 lbs.
Net weight of cable	20 lbs.
Net weight of switch	10½ lbs.
Net weight of repair parts and box	80 lbs.
Net weight of complete pump including cable, switch, basket strainer	95 lbs.
Net weight of complete pump including cable, switch, star strainer	101 lbs.
Shipping weight of pump	158 lbs.
Shipping weight of repair parts and box	108 lbs.

SECTION 2

Pumps—Detailed Description

Pump

The pump unit is simple in design, consisting of a squirrel cage induction motor mounted within a water-jacketed case and having a pump runner mounted on the motor shaft within the pump casing at the suction end of the pump. The suction and discharge are at opposite ends of the pump, all water passing through the water jacket thus cooling the motor.

The pump is designed to operate either submerged or not submerged and in any position; horizontal, vertical or any midway position. The pump will handle either fresh or salt water.

Motor

The pump motor has a continuous duty rating when pumping water or idling in air.

Strainers

The suction strainers, foot valve and suction and discharge connections of the pump are all furnished with National Standard 2½ inch Fire Hose Threads (Navy Dept. Specification 34F3). The pump may be operated with or without suction hose. When either strainer is installed directly on the suction end of the pump, without suction hose or foot valve, it is possible to pump down to within one inch of the bottom of compartment being unwatered.

The Star Strainer (Item No. 61) is furnished with National Standard 2½ inch Fire Hose Threads (Navy Dept. Specification 34F3). This Strainer completely surrounds the pump and extends the full length of the Pump Frame. (Mount Star Strainer on Pump Unit only).

Cable

The pump is provided with 45 feet of 4 conductor type FHO-9 (9030 CM) portable cable from the plug to the switch, in accordance with Military Specification MIL-C-915 (SHIPS) dated 15 November 1949 and Amendment 5 hereto dated 15 July 1951, and from the switch to the pump with 30 Feet type THOF-9 cable in accordance with the referenced Military Specification MIL-C-915 (SHIPS), except that two (2) 0.0625 inch diameter steel strands, in accordance with Specification MIL-C-5424, and one bare copper conductor, size 2½ (26) in accordance with Specification MIL-C-915 are cabled with the three insulated conductors, one strand in each of the three filler spaces. This cable complies with all requirements for Type THOF cable except the flexing endurance test. The completed cable has a

breaking strength of not less than 950 lbs. The strands are securely anchored to the terminal packing box (Item No. 30) in such a way that the insulated conductors are relieved of any strain when handling the pumps with the cable. The copper conductor acts as the main ground conductor and is grounded to the controller.

General

Care should be taken that the pump is rotating in the proper direction as indicated by the arrow on the pump casing; when looking at the runner end of the pump, the runner should rotate clockwise. The motor terminal and switch cable connections are such that when the black, white and red cable conductors are connected to the A, B and C phases respectively of the ship's service, the pump rotation should be correct. The steel seizing strands are the ground conductor.

PUMP SHOULD NOT BE USED FOR PUMPING GASOLINE OR OIL. DO NOT OPERATE THE PUMP AT ANY TIME WITHOUT THE SUCTION STRAINER ATTACHED.

The Star Strainer is attached directly to the pump, and should not be attached to the lower (suction) side of the foot-valve when suction hose is used. When the pump is used in this combination, the basket strainer should be attached to the foot-valve. (See photo inside Frontispiece).

The foot-valve is not required, and should not be used, when the pump is operated submerged. It should always be attached to the suction end of suction hose when pump is operated not submerged. See photograph at front of this book for completely assembled pump. Not more than 20 feet of suction hose should be used.

The pump is not self priming when operated unsubmerged; therefore priming is required if it is to be so used. Priming may be accomplished by lowering the pump into the water until discharge starts and then raising the pump to the level desired. Priming may also be accomplished by removing the discharge hose and filling the pump and suction hose with water prior to starting the pump; the foot valve holding the water until pumping starts.

The pump, being equipped from the switch to the pump with specially constructed 3 conductor cable with steel seizing strands securely enclosed in the terminal box, can be raised or lowered by the cable.

Do not use the pump for pumping warm or hot water. Do not allow pump to continue running after discharge stops.

After pumping salt water the pump should be **THOROUGHLY FLUSHED WITH FRESH WATER** and allowed to drain.

SECTION 3

Maintenance

General

Tools (*in italics*) referred to in Section 3 are detailed on Figure 5, Master Drawing Miscellaneous Details of Tools, Page 17, and listed on Page 6.

Drain the intermediate chamber after each operation of the pump or after 12 hours of continuous operation. This is done by removing the lower pipe plug (Item No. 5) in the pump housing, marked "Oil Here" on the connection box cover side (Item No. 29) using *wrench*. Refill the intermediate chamber with 8 oz. (1/2 pt.) of Navy Symbol 3050 (S.A.E. 20) lubricating oil. This operation eliminates any water that may have leaked into the intermediate chamber, and also insures lubrication of the mechanical seal.

The ball bearings in this pump are of the grease-seal type, and require no lubrication. Excess grease or oil should be avoided since it would cause deterioration of the motor insulation.

Disassembly

CAUTION: USE CARE TO PROTECT CORROSION RESISTANT PLASTIC COATING DURING DISASSEMBLY AND ASSEMBLY.

To disassemble the pump, refer to master drawing, Fig. 2 and proceed as follows:

1. Be sure that the plug at the end of the electric cable is removed from the electric outlet.
2. Drain intermediate chamber by removing the lower pipe plug (Item No. 5) in the pump housing, marked "Oil Here" on the connection box cover side (Item No. 29) using *Wrench*.
3. Unscrew strainer from pump (right hand threads).
4. Remove 8 nuts (Item No. 4) after which the suction cover (Item No. 19) may be removed. Care should be taken not to damage the gasket (Item No. 20) between the suction cover and the pump housing.
5. Remove the runner locking screw (Item No. 16) (right hand threads) and lock washer (Item No. 17). Use *shaft holding fixture*, which is fastened to the runner by means of two screws which fit into two tap holes in the "eye" of the runner. This wrench prevents the runner from turning. Holding the runner stationary, insert *runner retainer and locking screw wrench* through the hole in *shaft holding fixture*.
6. Remove runner retainer (Item No. 14) (right hand thread), and retainer washer (Item No. 14A). Use special wrenches as described in 5.
7. Pull the runner assembly (Item No. 13) off the shaft, and remove the runner key (Item No. 15). Remove retainer washer (Item No. 14A) and runner washer (Item No. 14B). Use *runner and splasher puller*.
8. Unscrew the oil cover (Item No. 7) (right hand thread) from the motor housing using *syphon seal retainer wrench*, remove gasket (oil cover) (Item No. 7A). Removal of the oil cover also brings with it the syphon seal (Item No. 8) and retainer (Item No. 10). Remove retainer (Item No. 10) using *syphon seal retainer wrench*, remove washer protector (Item No. 10B), seal retainer washer (Item No. 10A), seal (Item No. 8) and seal gasket (oil cover) (Item No. 8A).
9. Remove the shaft sleeve (Item No. 18) and seal collar (Item No. 11). Item No. 11 may be pulled off at the shaft using *runner and splasher puller*, as in 7.
10. Remove syphon seal (Item No. 8) and retainer (Item No. 9) by unscrewing from the pump housing (right hand threads) using *syphon seal retainer wrench*.
11. Turn to the discharge end of the pump and remove connection box cover (Item No. 29). Use *wrench* which exposes motor leads and terminal connections. Remove all leads from the terminal block.
12. Unscrew packing gland assembly (Item No. 30) (right hand thread) and remove cable from the pump.
13. Unscrew 8 frame stud nuts (Item No. 4) and remove discharge cover (Item No. 26), and remove bearing spring (Item No. 39). Care should be taken not to damage the gasket (Item No. 27).
14. Remove terminal bushing (Item No. 28) from the motor leads.
15. Remove motor rotor assembly (Item No. 36). The lower motor bearing (Item No. 37) and upper motor bearing (Item No. 38) will be attached to the rotor shaft.
16. If desired to remove the motor stator, withdraw the motor leads and unscrew the frame motor retainer (Item No. 6) (right hand thread) using *motor retainer wrench*. The stator (Item No. 34) can now be removed from the pump frame.

SECTION 3

MAINTENANCE

Assembly

1. To reassemble the pump reverse the above outlined procedure, carefully locking each part in place as it is assembled. Special care should be taken in replacing gaskets, lead connections, etc. Clean all gaskets and metal to metal surfaces, and apply a coating of silicone molybdenum sulphide grease.
2. Before the suction cover (Item No. 19) is replaced, turn the runner by hand to be sure there is no binding.
3. Be sure to replace the oil in the intermediate chamber.
4. Pipe Plugs (Item No. 5) and connection box cover (Item No. 29) shall be coated with silicone molybdenum sulphide grease and tightened thoroughly.
5. After pump is completely assembled, unscrew motor chamber pipe plug (Item No. 5, 1/2 inch I.P.), on the connection box cover side insert air connections for air line, connect to dry air line, and apply 50 pounds of air pressure to motor chamber, immerse pump in water to be sure there are no leaks in pump, i.e., no air bubbles appearing out of either intake, discharge, around (Item No. 5) pipe plugs, or (Item No. 29) connection box cover.
If there are no leaks, replace motor chamber pipe plug (Item No. 5), using silicone molybdenum sulphide grease on threads. Tighten plug using *wrench*.
6. Run the pump, in air without pumping water, for a few minutes to check for possible rubbing or binding, and to check direction of rotation.
7. Use silicone molybdenum sulphide grease on all the following items:
 - (1) Oil chamber and motor chamber pipe plugs (Item No. 5).
 - (2) Connection box cover threads and seat (Item No. 29).
 - (3) Oil cover threads and seat (Item No. 7).
 - (4) On surface where sylphon seal (Item No. 8) contacts oil cover (Item No. 7).
 - (5) All gasketed surfaces (Item 7A, 20, 27) and around the outside of terminal bushings (Item No. 28).

CAUTION: UNPLASTICIZED AREAS ADJACENT TO JOINTS OR PIPE PLUGS MUST BE COVERED WITH SILICONE MOLYBDENUM SULPHIDE GREASE TO PREVENT CORROSION.

LIST OF REPAIR PARTS AND SPECIAL TOOLS

SECTION 4

List of Repair Parts and Special Tools

Pump Parts (Refer Figs. 2 & 3)

Item	Name	Req'd.	Service Part No.	Buship Dwg. No.	Federal Stock No.
2	Frame Stud (Long)	1	1493AB	3,175,606	1H5307-206-3187
3	Frame Stud (Short)	1	1471AB	3,175,596	1H5307-206-3177
4	Frame Stud Nut	6	A15624HNM1		
4A	Washer—Stud Nut	16	558378-1	3,175,607	H5330-551-0435
5	Frame Pipe Plug	2	1592AB	3,175,604	H4730-293-7274
7	Oil Cover	1	4264AB	3,175,607	1H4320-308-6888
7A	Gasket (Oil Cover)	2	558383-1	3,175,607	KZ5330-222-2562
8	Seal	4	1388D	3,175,606	1H4320-302-1960
8A	Seal Gasket (Oil Cover)	2	558377-1	3,175,607	KZ5330-292-2456
10A	Seal Retainer Washer	2	558237-1	3,175,606	KZ5330-222-2562
10B	Washer Protector	2	558238-1	3,175,606	
11	Splasher Assembly	2	1476AB	3,175,608	1H4320-308-6884
13	Runner Assembly	1	25673AD	3,175,596	1H4320-035-7378
14	Runner Retainer	1	1331AB	3,175,606	1H5310-638-1142
14A	Retainer Washer	2	558239-1	3,175,606	
14B	Runner Washer	1	558323-1	3,175,604	
15	Key	1	1335AB		KZ5315-286-2333
16	Locking Screw	1	1332AB	3,175,606	1H4320-316-2954
17	Lockwasher	1	A1438		KZ5310-576-7168
18	Shaft Sleeve	1	1334	3,175,606	1H4320-097-1155
20	Cover Gasket	2	1469	3,175,604	KZ5330-298-0710
24	Valve Gasket	1	1344	3,175,605	KZ5330-256-8157
27	Cover Gasket	2	1494	3,175,606	1H4320-300-5919
28	Terminal Bushing	6	1466	3,175,607	1H5340-598-5322
29	Connection Box Cover	1	1484AB	3,175,606	1H4730-289-1820
33	Packing Ring	4	1495	3,175,606	KZ3540-598-5365
	440 V.		5833B	3,175,593	1H6105-500-4937
34	Stator 220 V.	1	15388B	3,175,593	1H6105-500-0327
	115 V.		45408	3,175,593	H6105-500-4940
36	Rotor Shaft Assembly	1	15389	3,175,596	1H4320-035-8922
37	Lower Bearing	1	A1491		KZ3110-156-3548
38	Upper Bearing	1	A1313		KZ3110-156-3508
39	Bearing Spring	1	A1279		KZ3110-227-4888
43	Terminal Nut	1	1492	3,175,606	KZ3510-265-9634
45	Studs	1	558303-1	3,175,607	1H5307-206-3171
45A	Screw	1	A1439		KZ5305-208-0042
	Silicone				
	Molybdenum Sulphide Grease ½ Pt.		550034-1		

Note: One of Item No. 11, Item No. 13, Item No. 14, two of Item No. 14A, one of Item No. 14B, Item No. 15, Item No. 16, Item No. 17 and Item No. 18 are packaged with Item No. 36, Rotor Shaft Assembly.

PORTABLE SUBMERSIBLE PUMP, A. C.

Switch Parts (Refer Figs. 3 & 6)

Item	Name	Req'd.	Service Part No.	Buship Dwg. No.	Federal Stock No.
6	Gasket	2	83642AA	9-S-73691-3	
	440 V. 10 amps.		A4053AA10	9-S-73691	
10	Fusetrons 220 V. 20 amps.	21	A4053AA20	9-S-73691-5	
	115 V. 30 amps.		A4053AA30	9-S-73691	
11	Fuse Retainer	3	A4104AA	9-S-5312-L-2	
13	Rotary Switch Assembly	1	83645AB	9-S-73047	
14	Screw	2	A1142OPHT7		
15	Lockwasher	2	A1441AC	9-S-73691-8	
17	Packing Ring	4	83649AA		
26	Packing Ring	4	33284AB		
36	Fuse Clip 30 amps.	3	A1316AB	9-S-4296-L-1	
37	Fuse Clip Nut	3	33283AB	9-S-4296-L-3	
38	Terminal Assembly	3	83655AA	9-S-73055-42	
39	Ground Lead Terminal	2	A2926AA3	9-S-1841-L-37	
40	Terminal Screw Assembly	3	83651AA	9-S-73055-22	

Tools (Refer Figs. 3 & 5)

No.	Name	Req'd.	Service Part No.		Federal Stock No.
			Regular	Non-Magnetic	
6	Sylphon Seal Retainer Wrench	1	1487	1487AB	1H5120-468-0916
6	Motor Retainer Wrench	1	15701	15701AB	1H5120-468-0917
6	Shaft Holding Fixture	1	15702	15702AB	
6	Runner & Puller	1	15703	15703AB	
6	Wrench Splasher	1	5686AC	5686AB	
6	Runner Retainer & Locking				
	Screw Wrench	1	23600	23600AB	1H5120-468-0920

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Boxing

Name	Req'd.	Service Part No.
Spare Parts Box with Liners Steel Box	1	23436AA
Wooden Box (Non-Magnetic)		23436AC
Spare Parts Packing Box	1	83777AA

SECTION 5

Controller

The Controller, Figure 6, Part No. 576122 (Non-Magnetic) for use with Pump, Model 777H, as manufactured by Prosser Industries, conforms with Bureau of Ships Standard Drawing No. 9000-S6202-73691, Alt. 1.

Rating

1. Controller rating: 30 Amperes — 500 Volts, A. C.

Voltage	Amperes			Fusetron Amp. Rating	Prosser Industries Fusetron No.
	Full Load	Locked Rotor	Starting Condition		
115	30	120	60	30A	A4053AA30
220	15	60	30	20A	A4053AA20
440	7½	30	15	10A	A4053AA10

2. Navy Service Condition — “Navy A” Ambient temperature 50° C.
3. Degree of Enclosure — Watertight.
4. Control Functions — Motor Starting.
5. Type of Construction — Across-the-line starter.
6. Kinds of Protection — Short circuit. Type — fusetrons.

Description

The controller is a rotary type. Turn handle clockwise to “on” position to start pump and to “off” position to stop pump.

The Box and Cover is constructed of stainless steel. Weight complete, 10 pounds.

All spare parts are boxed with pump and motor spare parts (refer Section 4, List of Repair Parts and Special Tools).

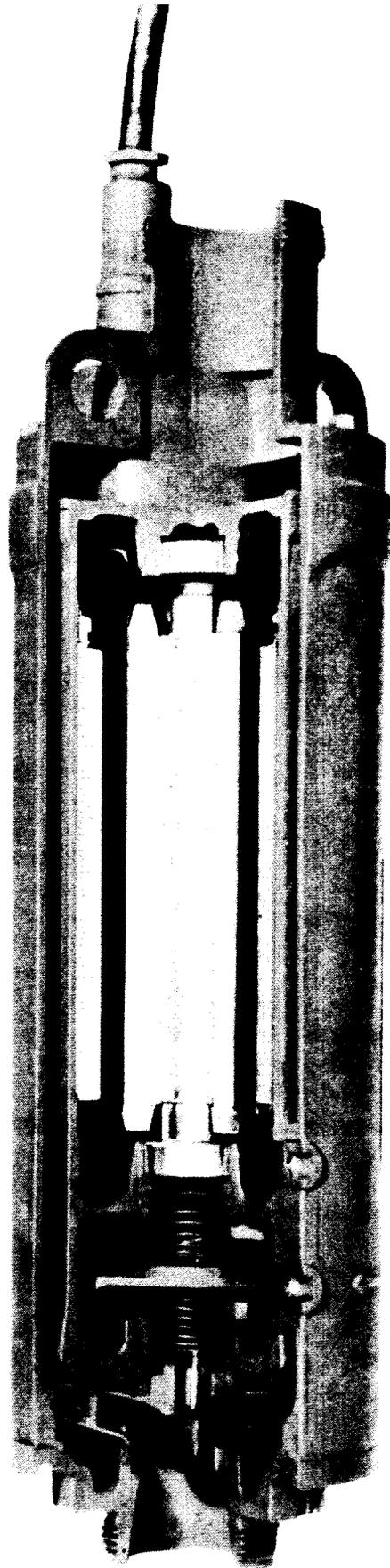
Maintenance

To replace cover gasket, Item No. 6, loosen six hex hold-down bolts, and lift off cover. Remove old gasket from cover and press new gasket firmly into place. Replace cover and tighten hold-down bolts.

To replace switch assembly, remove cover and two interior mounting nuts, Item No. 14. Remove old switch and insert new switch in place. Replace mounting nuts and cover.

To replace fuses: Be sure that switch handle is in “off” position. Remove cover and draw fuses out of fuse clips. Insert new fuses of proper rating as marked on the fuse base. Replace cover. Three spare fuses are in cover compartment (See Fig. 6—Section BB—Item No. 10).

To replace packing ring rubber, remove gland nut, Item No. 28A, and gland ring, Item No. 25. Remove old rubber, Item No. 26. New rubber is then inserted. Replace Items 25 and 28A. Caution should be observed in removing all pieces of the old rubber and seating the new one without wrinkles.



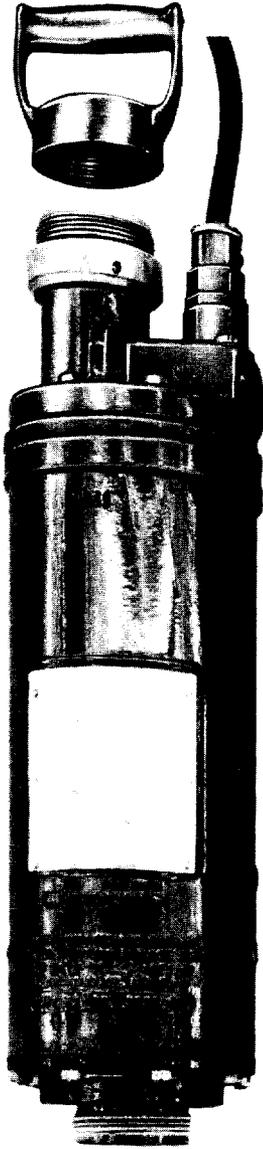
SECTION VIEW OF PUMP
9

FIGURE 1

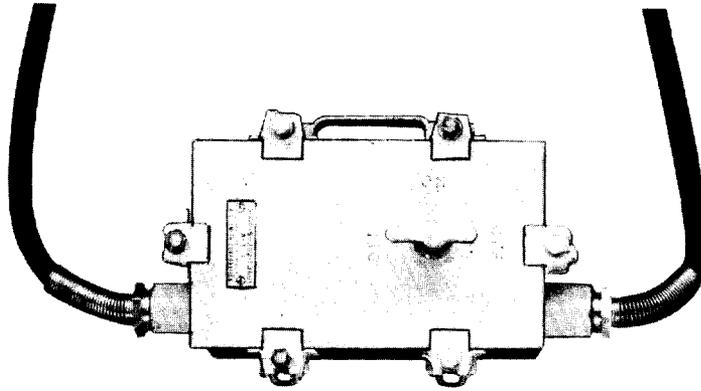
PROSSER INDUSTRIES

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MODEL 777H — A. C. PORTABLE SUBMERSIBLE PUMP

carrying handle



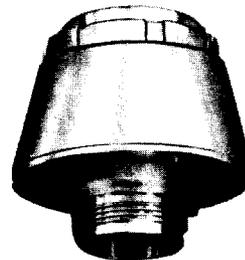
pump unit



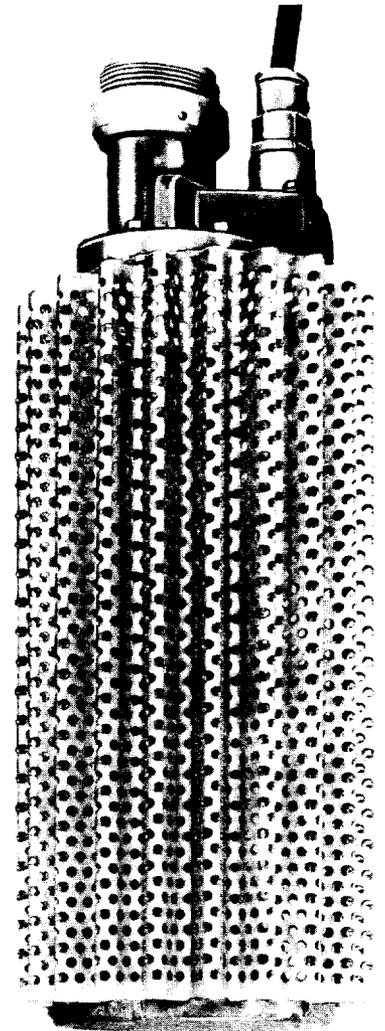
watertight switch



basket strainer



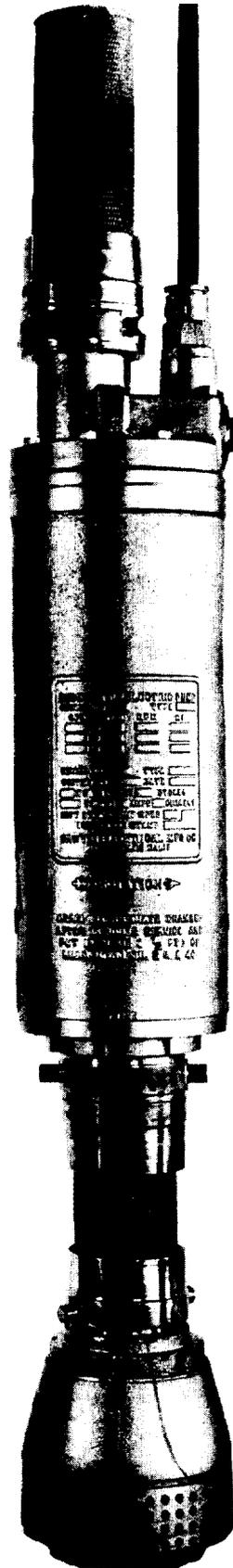
foot valve



pump with
star strainer in place

COMPLETE MODEL 777H PUMP FRONTISPIECE

MODEL 777H—A. C. PORTABLE SUBMERSIBLE PUMP



**VIEW SHOWING
METHOD OF MOUNTING SUCTION HOSE BETWEEN
PUMP AND FOOT VALVE ASSEMBLY**

REV	DESCRIPTION	DATE	BY	CHKD
1	INITIAL DESIGN	10 MAR 1954	J. H.
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ITEM	NAME	QTY	MATERIAL	DESCRIPTION	QUANTITY FOR ONE PUMP	UNIT PRICE	REMARKS
1	BRASS	1	BRASS	MIL-A-17249 CL 3 RT 2	1.00
2	STEEL WIRE	2	STEEL WIRE	MIL-S-8854 CL 7 TYPE C
3	BRASS	1	BRASS	MIL-A-17249 CL 3 RT 2
4	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
5	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
6	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
7	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
8	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
9	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
10	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
11	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
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13	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
14	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
15	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
16	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
17	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
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26	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
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39	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
40	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
41	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
42	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
43	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
44	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
45	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
46	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
47	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
48	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
49	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
50	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
51	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
52	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
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59	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
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62	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
63	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
64	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
65	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
66	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
67	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
68	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
69	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
70	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
71	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
72	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
73	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
74	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
75	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
76	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
77	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
78	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
79	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
80	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
81	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
82	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
83	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
84	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
85	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
86	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
87	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
88	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
89	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
90	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
91	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
92	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
93	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
94	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
95	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
96	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
97	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
98	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
99	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C
100	BRASS	1	BRASS	MIL-S-8854 CL 7 TYPE C

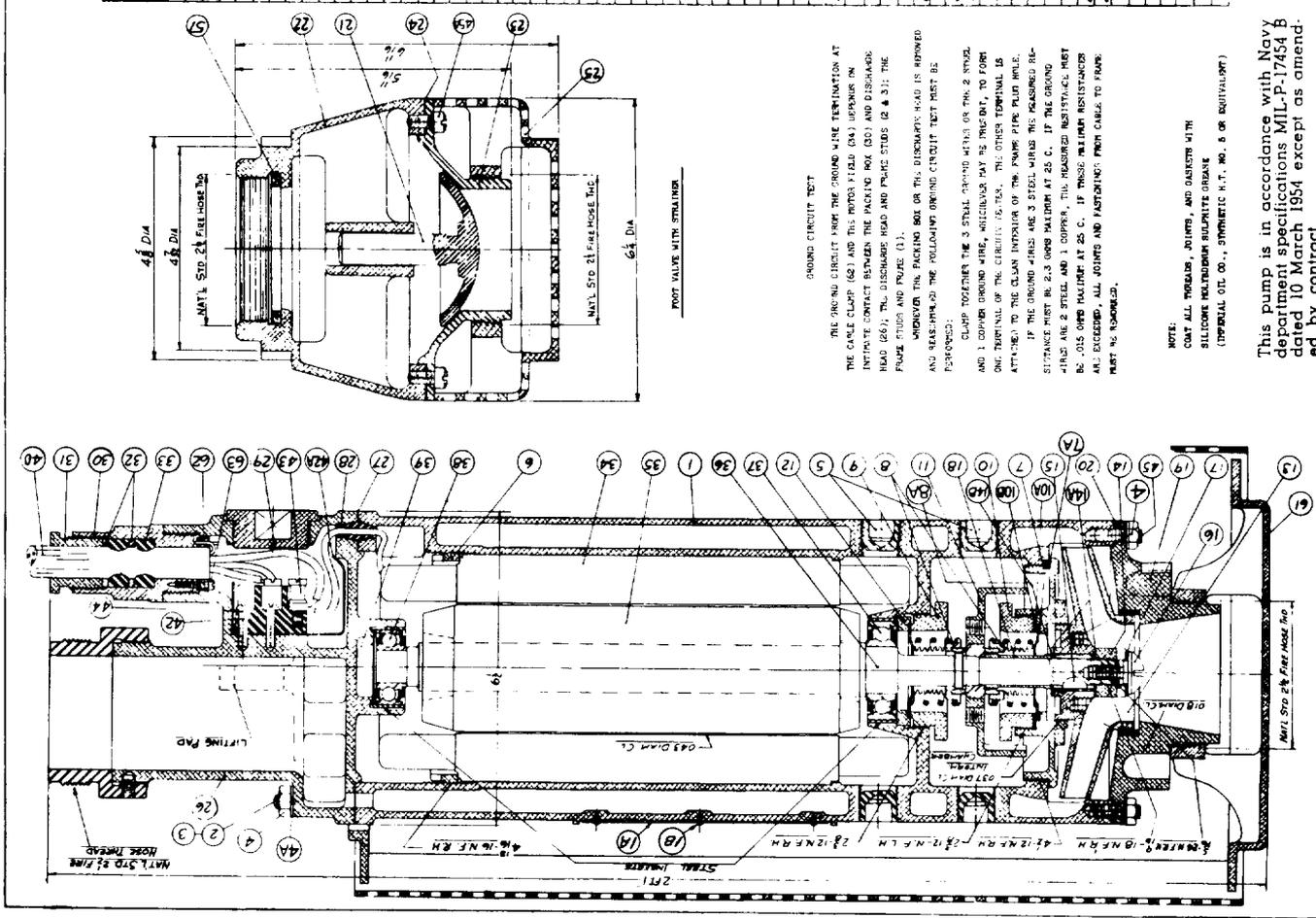
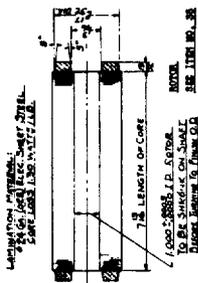


FIGURE 2

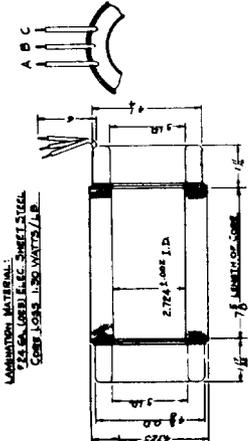
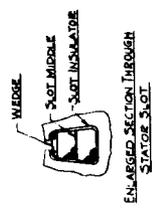
This pump is in accordance with Navy department specifications MIL-P-17454 B dated 10 March 1954 except as amended by contract.

REV.	DESCRIPTION	DATE	BY



NOT SERVICED SEPARATELY

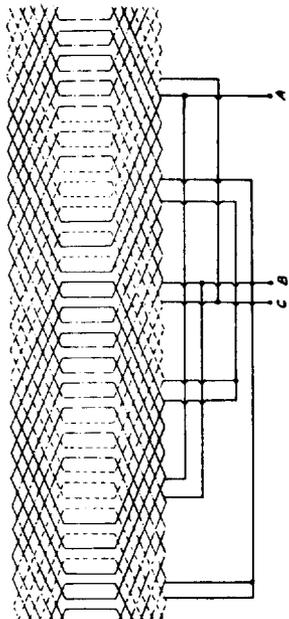
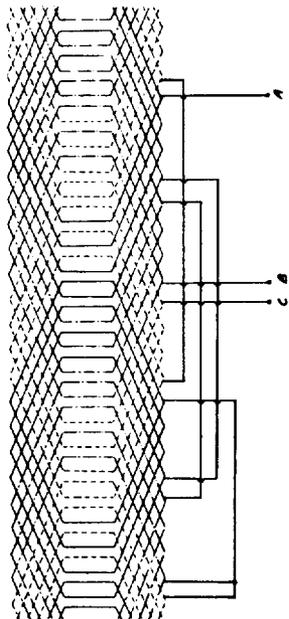
NUMBER OF BARS	MATERIAL (SEE PART)
19	ALUMINUM (SEE PART)
INTERVAL OF END BARS	ALUMINUM (SEE PART)



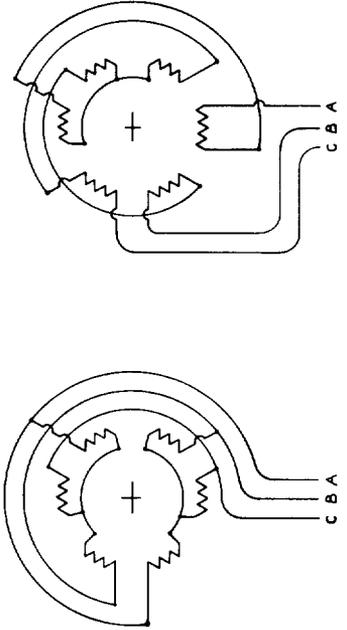
STATOR WINDING DATA	
SERVICE PART NO.	158089
STD. WATT STOCK NO.	440
VOLTAGE	115
NUMBER OF POLES	2
TYPE OF CONNECTION	PARALLEL Y
NUMBER OF SLOTS	24
NUMBER OF COILS	24
GROUPING OF COILS	4 COILS PER GROUP
WINDING PITCH IN SLOTS	1 - 11
TURNS IN SERIES PER COIL	20
CONDUCTOR INSULATION	1 - 80 A 1 - 80 1 - 80 A 1 - 80 2 - 80 A 2 - 80
TEMP. BETWEEN WIND. @ 20° C	HEAVY POWER
TEMP. OF COPPER - PHOSPH	5 LB. 5 OZ.

STATOR INSULATION MATERIAL	
APPLICATION	SPECIFICATIONS
SLOT INSULATOR	WAXED PAPER & RICA
SLOT WEDGE	REL-1-1720S OR 0 C-1
TOP WEDGE	REL-1-1720S OR 0 C-1
INSULATION BETWEEN PHASES	REL-1-1720S OR 0 C-1
INSULATION ON COIL EXTENSION	REL-1-1720S OR 0 C-1
INSULATION ON COIL LEADS	REL-1-1720S OR 0 C-1
VARIANTS	JAN-6-1157, OR C, B, TYPE N

1. FIRST IMPREGNATION AND BAKE:
 STATOR STATIONS ON END, LEADS EXTENSIVE (VARIABLE) TO ONE-HALF (1/2) STATOR LENGTH IN WETTING-THICKENED WAXED PAPER OR 15 MINUTES. SUBSEQUENT STAGES COMPLETE FOR 15 MINUTES AFTER ALL REMOVED AND DRAIN FOR 30 MINUTES.
 WAXED PAPER AND COIL DEPRESSORS.
 WAXED PAPER AND COIL DEPRESSORS WITH WAX.
 BASE STATIONS IN AIR OVEN FOR 10 HOURS AT 275° F.
 BAKED STATIONS IN WAXED PAPER FOR 15 MINUTES. REMOVE AND DRAIN FOR 30 MINUTES.
2. FINISHING:
 CLEAN LEADS AND WIND COILS.
 PAINT AND COILS WITH GENERAL ELECTRIC (GEPAL) NO. 1201 AIR DRY FOR 2 HOURS MINIMUM.
 BOTTY PREPARED.



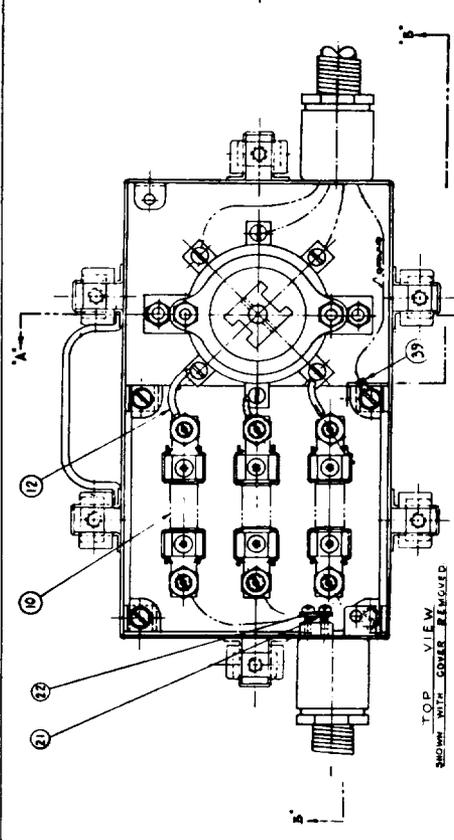
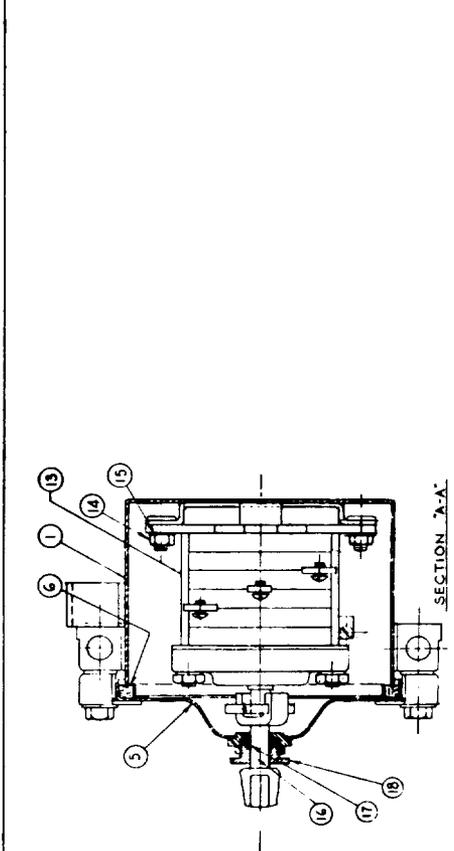
CLASSIFICATION DATA	
PPF'S. TYPE: 7776	SPEED CLASS: CONSTANT
INSULATION: SUPERISOLE	IRL IN AIR: CONTINUOUS
WATTED R.P.: 5	WATTED R.P.: 2450
DISIGN: A.C. INDUCTION	TYPE MOTOR: SQUIBBE COIL
INSULATION: CLASS A & B	WATT SERVICE: A
APPERT TYP.: 40 C (A13)	30 C (A13)
VOLTAGE	440 280
FULL LOAD APP.	7.5 15
LOCK MOTOR APP.	30 60
START. LOAD APP.	18 30
FULL LOAD P. %	87 87



REV.	DESCRIPTION	DATE	BY

FIGURE 4

REV.	DESCRIPTION	DATE	BY



SECTION 'A-A'

TOP VIEW
SHOWN WITH COVER REMOVED

ITEMS ALSO SUPPLIED AS REPAIR PARTS

ITEM	QTY.	MATERIAL	SPECIFICATION	SERVICE PART NO. OR PART NO.	REMARKS
1	1	STAINLESS STEEL	AISI 302	1785718	AS FINISH COMPLETE ITEM 1A, 1B, 1C, 1D
2	2	BRASS	MIL-B-50	328741C	
3	2	STAINLESS STEEL	AISI 302	834445B	
4	2	STAINLESS STEEL	AISI 302	709484C	
5	2	STAINLESS STEEL	AISI 302	886448A	
6	2	BRASS	COMMERCIAL BRASS (C86200)	178584B	
7	2	STAINLESS STEEL	AISI 302	456344A	
8	2	STAINLESS STEEL	AISI 302	456344A	
9	2	STAINLESS STEEL	AISI 302	456344A	
10	2	STAINLESS STEEL	AISI 302	456344A	
11	2	STAINLESS STEEL	AISI 302	456344A	
12	2	STAINLESS STEEL	AISI 302	456344A	
13	2	STAINLESS STEEL	AISI 302	456344A	
14	2	STAINLESS STEEL	AISI 302	456344A	
15	2	STAINLESS STEEL	AISI 302	456344A	
16	2	STAINLESS STEEL	AISI 302	456344A	
17	2	STAINLESS STEEL	AISI 302	456344A	
18	2	STAINLESS STEEL	AISI 302	456344A	
19	2	STAINLESS STEEL	AISI 302	456344A	
20	2	STAINLESS STEEL	AISI 302	456344A	
21	2	STAINLESS STEEL	AISI 302	456344A	
22	2	STAINLESS STEEL	AISI 302	456344A	
23	2	STAINLESS STEEL	AISI 302	456344A	
24	2	STAINLESS STEEL	AISI 302	456344A	
25	2	STAINLESS STEEL	AISI 302	456344A	
26	2	STAINLESS STEEL	AISI 302	456344A	
27	2	STAINLESS STEEL	AISI 302	456344A	
28	2	STAINLESS STEEL	AISI 302	456344A	
29	2	STAINLESS STEEL	AISI 302	456344A	
30	2	STAINLESS STEEL	AISI 302	456344A	
31	2	STAINLESS STEEL	AISI 302	456344A	
32	2	STAINLESS STEEL	AISI 302	456344A	
33	2	STAINLESS STEEL	AISI 302	456344A	
34	2	STAINLESS STEEL	AISI 302	456344A	
35	2	STAINLESS STEEL	AISI 302	456344A	
36	2	STAINLESS STEEL	AISI 302	456344A	
37	2	STAINLESS STEEL	AISI 302	456344A	
38	2	STAINLESS STEEL	AISI 302	456344A	
39	2	STAINLESS STEEL	AISI 302	456344A	
40	2	STAINLESS STEEL	AISI 302	456344A	
41	2	STAINLESS STEEL	AISI 302	456344A	
42	2	STAINLESS STEEL	AISI 302	456344A	
43	2	STAINLESS STEEL	AISI 302	456344A	
44	2	STAINLESS STEEL	AISI 302	456344A	
45	2	STAINLESS STEEL	AISI 302	456344A	
46	2	STAINLESS STEEL	AISI 302	456344A	
47	2	STAINLESS STEEL	AISI 302	456344A	
48	2	STAINLESS STEEL	AISI 302	456344A	
49	2	STAINLESS STEEL	AISI 302	456344A	
50	2	STAINLESS STEEL	AISI 302	456344A	
51	2	STAINLESS STEEL	AISI 302	456344A	
52	2	STAINLESS STEEL	AISI 302	456344A	
53	2	STAINLESS STEEL	AISI 302	456344A	
54	2	STAINLESS STEEL	AISI 302	456344A	
55	2	STAINLESS STEEL	AISI 302	456344A	
56	2	STAINLESS STEEL	AISI 302	456344A	
57	2	STAINLESS STEEL	AISI 302	456344A	
58	2	STAINLESS STEEL	AISI 302	456344A	
59	2	STAINLESS STEEL	AISI 302	456344A	
60	2	STAINLESS STEEL	AISI 302	456344A	

SECTION 'B-B'



SECTION 'B-B'

CONTROL SWITCH IN ACCORDANCE WITH BUSBARS STANDARD DRAWING NO. 3900-35202-7389/11M

SECTION 'C-C' (SHOWN WITH COVER REMOVED)

CONNECTION DIAGRAM

CONNECT BLACK CONDUCTOR TO 120V AC POWER SOURCE

CONNECT WHITE CONDUCTOR TO 120V AC POWER SOURCE

CONNECT GREEN CONDUCTOR TO GROUND

FROM POWER SWITCH (CONNECTED TO MAINLINE THROUGH MAINLINE SWITCH)

TO 120V AC POWER SOURCE

TO 120V AC POWER SOURCE

TO GROUND

TO GROUND

TO GROUND

FIGURE 6